

What is claimed is:

1. A method of providing heat for an interior space, the method comprising the steps of:

providing a HVAC system having a compressor, a condenser and an evaporator connected in a closed refrigerant loop;

providing an auxiliary heater controllable independently of the HVAC system;

operating the HVAC system to provide heat in response to a demand for heating in the interior space;

comparing an ambient outside temperature with a predetermined balance point temperature associated with the HVAC system; and

enabling the auxiliary heater in response to the ambient outside temperature being greater than the predetermined balance temperature and the satisfaction of at least one predetermined criteria related to the HVAC system.

2. The method of claim 1 wherein the at least one predetermined criteria includes the HVAC system being operated for a predetermined time.
3. The method of claim 1 wherein the at least one predetermined criteria includes an indoor temperature of the interior space being less than a predetermined indoor temperature.
4. The method of claim 1 wherein the predetermined time is a compressor run time.
5. The method of claim 1 wherein the predetermined time is a predetermined value.
6. The method of claim 1 wherein the ambient outside temperature is less than a value that can damage the interior space.
7. The method of claim 6 wherein the ambient outside temperature is less than about 32°F.
8. The method of claim 1 further including an additional step, of sensing the operational status of the HVAC system, wherein upon sensing the operational status of the HVAC system functioning improperly, the auxiliary heater is enabled

without regard to the HVAC system being enabled for the predetermined time or the interior space being less than the predetermined indoor temperature.

9. The method of claim 1 wherein the step of enabling the auxiliary heater includes the step of enabling the auxiliary heater in response to the ambient outside temperature being greater than the predetermined balance point temperature and less than a second predetermined temperature, and at least one of the HVAC system being operated for the predetermined time and the indoor temperature of the interior space being less than the predetermined indoor temperature.
10. The method of claim 9 wherein the second predetermined temperature is greater than a value that can damage the interior space.
11. A control system for selectively providing heat to an interior space comprising:
 - a control panel configured to control a HVAC system having a compressor, a condenser and an evaporator connected in a closed refrigerant loop, and an auxiliary heater controllable independently of the HVAC system, the control panel comprising:
 - a first sensor to measure an ambient outside temperature;
 - a control device, the control device receiving a demand for heating the interior space from the HVAC system based on the interior space being less than a first predetermined indoor temperature; and
 - a storage device storing a predetermined balance point temperature associated with the HVAC system; and
 - wherein the control device being configured to engage the auxiliary heater in response to the ambient outside temperature being greater than the predetermined balance point temperature and the satisfaction of at least one predetermined criteria related to the HVAC system.
12. The control system of claim 11 wherein the at least one predetermined criteria includes the HVAC system being operated for a predetermined time.

13. The control system of claim 11 wherein the at least one predetermined criteria includes an indoor temperature of the interior space being less than a predetermined indoor temperature.
14. The control system of claim 11 wherein the predetermined time is a compressor run time.
15. The control system of claim 11 wherein the predetermined time is a predetermined value.
16. The control system of claim 11 wherein the control panel is incorporated in a controller.
17. The control system of claim 11 wherein the control panel is incorporated in a thermostat.
18. The control system of claim 11 wherein the ambient outside temperature is less than a value that can damage the interior space.
19. The control system of claim 14 wherein the ambient outside temperature is less than about 32°F.
20. The control system of claim 11 wherein the at least one predetermined criteria including upon the control panel determining the HVAC system functioning improperly, the control panel enables the auxiliary heater without regard to the at least one of the HVAC system being enabled for the predetermined time and the indoor temperature of the interior space being less than the second predetermined temperature.
21. The control system of claim 20 wherein the control panel includes a diagnostic module to determine if the HVAC system is functioning improperly.
22. The control system of claim 11 wherein the at least one predetermined criteria including upon the control panel determining the ambient outside temperature being greater than the predetermined balance point temperature and at least one of the HVAC system being enabled for the predetermined time and the indoor temperature of the interior space being less than the second predetermined

temperature, unless the ambient outside temperature is greater than a third predetermined temperature.

23. The control system of claim 22 wherein the third predetermined temperature is greater than a value that can damage the interior space.

24. A HVAC system for an interior space, the HVAC system comprising: /
a compressor, a condenser and an evaporator connected in a closed refrigerant loop;
an auxiliary heater controllable independently of the refrigerant loop;
a control panel configured to control the HVAC system, the control panel comprising:
a first sensor to measure an ambient outside temperature;
a second sensor to measure an indoor temperature of the interior space;
a control device; and
a storage device storing a predetermined balance point temperature associated with the HVAC system; and
wherein the control device being configured to engage the auxiliary heater in response to the ambient outside temperature being greater than the predetermined balance point temperature and the satisfaction of at least one predetermined criteria related to the HVAC system.

25. The HVAC system of claim 24 wherein the at least one predetermined criteria includes the HVAC system being operated for a predetermined time.

26. The HVAC system of claim 24 wherein the at least one predetermined criteria includes an indoor temperature of the interior space being less than a predetermined indoor temperature.

27. The HVAC system of claim 24 wherein the predetermined time is a compressor run time.

28. The HVAC system of claim 24 wherein the predetermined time is a predetermined value.

29. The HVAC system of claim 24 wherein the ambient outside temperature is less than a value that could result in damage to the interior space.
30. The HVAC system of claim 29 wherein the ambient outside temperature is less than about 32°F.
31. The HVAC system of claim 24 wherein the control panel being configured to determine if the HVAC system is functioning improperly, the control panel being configured to enable the auxiliary heater without regard to at least one of the HVAC system being enabled for the predetermined time and the indoor temperature of the interior space being less than the second predetermined temperature.
32. The HVAC system of claim 31 wherein the control panel includes a diagnostic module to determine if the HVAC system is functioning improperly.
33. The HVAC system of claim 24 wherein the control panel being configured to determine if the ambient outside temperature is greater than the predetermined balance point temperature and at least one of the HVAC system being enabled for the predetermined time and the indoor temperature of the interior space being less than the second predetermined temperature, unless the ambient outside temperature is greater than a third predetermined temperature.
34. The HVAC system of claim 33 wherein the third predetermined temperature is greater than a value that could result in damage the interior space.